

SDU DC - B Series, DIN Rail UPS

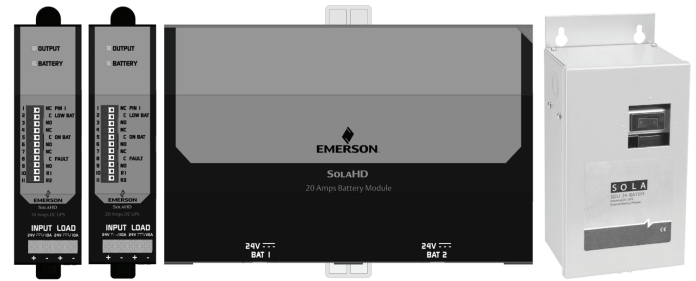
The SolaHD SDU DC - B DIN Rail UPS is an advanced 24 Vdc uninterruptible power system that combines an industry leading design with a wide operational temperature range and unique installation options. The SDU DC - B UPS is a powerful, microprocessor controlled UPS that provides protection from power interruptions. With an input voltage range of 22.1 Vdc to 28.6 Vdc, the DC - B UPS is the ideal power back-up solution for your critical connected loads.

Applications

- Industrial/Machine Control
- Automation Process Control
- Computer-based Control Systems
- Conveying Equipment
- Material Handling
- Packaging Machines
- Semiconductor fabrication equipment
- DeviceNet™
- Amusement Park Equipment
- Pharmaceutical Applications
- Control Rooms

Features

- Modular, rugged industrial grade design
- Microprocessor based controls
- Automatic self-test feature for UPS function and battery management check
- Power module wide operation temperature range (-15 °C to +50 °C)
- Flexible batteries back-up expansion capabilities
- Overload protection in normal and battery modes
- User replaceable batteries
- IP20 rated input and output screw terminals
- No internal fan, no extra cooling required
- Sturdy, reliable all metal DIN rail mounting connector
- LED status indicators
- Universal dry contact relay terminals provide remote signaling
- Monitoring, diagnostics, and remote turn-on and shut-off capabilities
- Two year limited warranty



Certifications

- **cUL US** Listed, Electrical Equipment for Measurement, Control and Laboratory Use; Control Equipment, E61379
- UL/CSA 61010-1, UL/CSA 61010-2-201
- **cRU US** UL Recognized Component, Audio/video, Information and Communication Technology Equipment, E137632
- UL/CSA 62368-1, UL/CSA 60950-1
- **CE UK CA** Low Voltage Directive/ Electrical Equipment (Safety) Regulations 2016
- IEC/EN60950-1, IEC/EN 62368-1, IEC/EN 61010-1, IEC/EN 61010-2-201

Related Products

- SDN-D Series DIN Rail Power Supplies
- STV 25K Series Surge Protective Devices

Selection Table

| Catalog Number | Description | Approx. Ship Weight lbs (kg) |
|---------------------|---|------------------------------|
| UPS | | |
| SDU 10-24B | 240 VA, 24 V/10 A DIN Rail DC UPS power module, battery module is required | 0.9 (0.41) |
| SDU 20-24B | 480 VA, 24 V/20 A DIN Rail DC UPS power module, battery module is required | 0.9 (0.41) |
| Battery | | |
| SDU 24-BATB | 24 V DIN Rail/Panel Mount Battery Module (cable included) | 11.5 (5.2) |
| SDU 24-BATEM | 24 V External Mount Battery Module (cable included) | 16.0 (7.11) |
| Accessories | | |
| SDU24EXTBC6B | Optional 6 ft. Battery Module cable to 24 V DC UPS | 0.5 (0.22) |
| SDU-PMBRK | Optional chassis mount brackets to secure the DC UPS to wall, back of panel, or enclosure | 0.5 (0.22) |

There are three individual hardware products when putting an SDU DC - B UPS system into operation:

1. 24 Vdc Power Supply (Recommended SolaHD SDN Series)
2. 24 Vdc SDU DC - B UPS Power Module
3. 24 Vdc SDU DC - B UPS Battery Module; or 24 Vdc SDU DC - B UPS External Battery Module

There are two models of the SDU DC - B UPS Power Module:

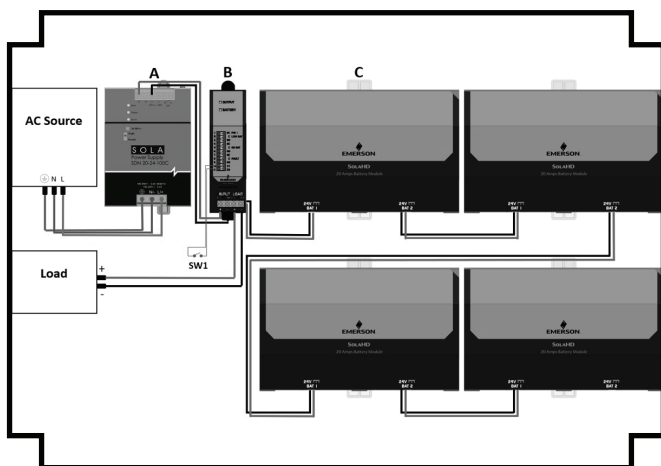
1. SDU 10-24B, 24 Vdc/10 Amp (battery modules are required)
2. SDU 20-24B, 24 Vdc/20amp (battery modules are required)

There are two models * of the SDU DC - B UPS Battery Modules:

1. SDU 24-BATB, DIN Rail/Panel mount for installation in ventilated enclosure, up to 4 battery modules can be connected to the SDU DC - B UPS.
2. SDU 24-BATEM, Panel mount, alternate battery module for external installation in a non-hazardous environment of non-ventilated enclosures, only 1 battery module can be connected to the SDU DC - B UPS.

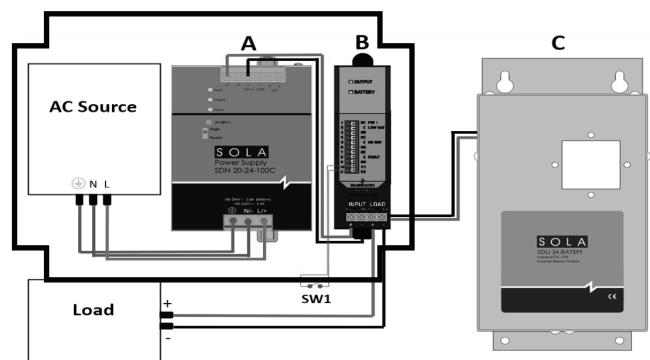
* Cannot use a combination of both models of the battery modules, only one model of the battery module can be connected to the SDU DC - B UPS.

DIN Rail Mounted Battery Option



- A) AC/DC Power Supply
 B) Control Module: SDU 10-24B or SDU 20-24B
 C) Battery Module: SDU 24-BATB

External Battery Option



- A) AC/DC Power Supply
 B) Control Module: SDU 10-24B or SDU 20-24B
 C) Battery Module: SDU 24-BATEM

SDU DC - B UPS Power Modules Specifications

| Specification | SDU 10–24B | SDU 20–24B |
|--|--|------------|
| | Efficiency | |
| Normal Mode | >95% | |
| Battery Mode (Fully–charged battery) | >93% | |
| | Input | |
| Nominal Input Voltage | 24 Vdc | |
| Input Voltage Range | 22.1 - 28.6 Vdc | |
| | Output | |
| Output Ripple (Normal Mode, Fully – Charged Battery) | Vin Ripple = Vout Ripple | |
| Output Voltage Range | Worst case: Vin – 0.4 Vdc = Vout | |
| Output Current | 10 A | 20 A |
| Output Power | 240 W | 480 W |
| | Protection | |
| Input Current Protection (Normal Mode) | Internally Fused 30 A 58 Vdc | |
| Peak Output Current Capability (Normal Mode) | Power boost (allows for 120% of rated load for > 4 seconds) Peak current allowed for very short period of time (6X for 5 milliseconds) allowing time to trip output ckt. Breakers - without damage to the unit and auto-recovery | |
| Short Circuit (SDU DC Output) | UPS Shutdown, Auto-Recovery | |
| Input Protection | Allowable Input 22.1 V Min / 28.6 Max or UPS goes to Battery Mode | |
| Reversed DC input connection | UPS goes to Battery Mode | |
| Battery Over–Voltage Protection | Charging stops at 28 V and Auto-Recovers | |
| Reversed battery connection | Charger disables; No impact on DC UPS unit | |
| Other possible battery faults | Charger disables; No impact on DC UPS unit | |
| Back EMF Immunity, Output | < 35 V Max, No damage, Auto-Recovery Mode | |
| Over–Temperature sensing protections | Unit to shutdown at an overtemperature event, auto-recovery | |
| | Diagnostics | |
| SSR/Relay IO | Solid state form "C" contacts for On battery, low battery and battery fault. Connector size range: 24 – 16 AWG (0.34 – 4 mm ²) | |
| LED | 2 LED Diagnostics for Battery and Output, Red and Green LED which can be solid or flashing. Refer to tab "Signal Table" | |
| | Environment | |
| Operating Ambient Temperature (Still Air) | -15 °C to +50 °C, Full Load | |
| Storage Ambient Temperature (Still Air) | -40 °C to +85 °C | |
| Operating Ambient and Storage Ambient Humidity (Still Air) | 0% to 95% RH, Non-Condensing; IEC 60068-2-2, 60068-2-3 | |
| Audible Noise | <40 dBA at 1 m Distance | |
| Altitude | 3000 meters Max. | |
| EMC/EMI | EMC Directive: FCC Part 15, Subpart B, Class A, Level 4, EN 62040-2 Category C2, EN 55032, EN 55011, EN 55024, EN 55035, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61326-1, EN61000-3-2, EN 61000-3-3, IEC/EN 61000-4 Series, | |
| Vibration | Operating - IEC60068-2-6, Sine Wave: 10 Hz to 60 Hz, displacement of 0.35 mm 60 Hz to 500 Hz @ 5g, 60 min for Y direction | |
| | Non-Operating - IEC60068-2-6, Random : 5 Hz to 500 Hz @ 2g (RMS); 20 min per axis for all X, Y, Z | |
| | IEC 60068-2-6, Vibration Class A | |
| Shock | Operating - IEC60068-2-27, Half Sine Wave: 10 G for a duration of 11 ms, 3 shocks for 1 direction (X axis) | |
| | Non-Operating - IEC60068-2-27, Half Sine Wave : 30 G for duration of 11 ms, 3 shocks for all 3 axes | |
| | Weight and Dimensions | |
| Net Weight – lbs (kg) | 0.9 (0.41) | |
| Dimensions H x W x D – in. (mm) | 4.88 X 1.37 X 4.8 (124 X 35 X 121.9) | |

Notes:

1. See Battery Back-up Times on next page.
2. DC UPS System includes one power module (SDU 10-24B or SDU 20-24B) and one or more battery modules (SDU 24-BATB or SDU 24BATEM)

SDU DC - B UPS Battery Module Specifications

| Parameter | SDU 24-BATB | SDU 24-BATEM |
|---------------------------------|---|------------------------------------|
| Type | Sealed, Maintenance-Free, Valve Regulated Lead Acid (VRLA) Batteries (2 Batteries for each Module) | |
| Typical Recharge Time | 3 hours to 10 hours | |
| Back-up Time (at 480 W) | 4 min. | |
| Battery Terminals | Polarized Terminal Connections for the Battery (+Red color, - Black color): Composed of two PP 15/45 Anderson power pole housings to ensure a keyed connection between the power module and the battery module. NOTE: The maximum length of the connection between the power module and battery module is 6 ft. (1.85 m) | |
| Signal Terminals (Push Pin) | Connector Size Range: 24-16 AWG (0.34-4 mm ²) CM to define based on specifications of the connector vendor | |
| Mounting | To be mounted on DIN TS35/7.5 or TS35/15 rail system, Optional Chassis mounting permissible via built in tabs; Unit should handle normal shock and vibration of industrial use and transportation without falling off rail. Apply to both thin and thick DIN Rail (1.0 and 1.5 mm), optional screw mounting set SDU-PMBRK. | |
| Mounting Orientation | Vertical, Up-right Din Rail | |
| Charging Current | For Battery Voltage < 28 V, Charging Current = 1.2 A For Battery Voltage ≥ 28 V, Charging Current = 0.15 A | |
| Remote ON/OFF Feature | Must be Non polarized external switch enabled. Should be able to withstand requirements of EN61000-4 for Signal I/O To enable the UPS close the switch that is connected to the terminals To disable the UPS open the switch that is connected to the terminals | |
| Dimensions H x W x D – in. (mm) | 4.85 x 7.57 x 4.33 (123.3 x 192.4 x 110.0) | 11.5 x 5.6 x 4.6 (292 x 142 x 116) |

SDU DC - B UPS Back-Up Times (Typical)

| SDU 10-24B with SDU 24-BATB | | | | | |
|------------------------------|----------|----------|-----------|-----------|-------------|
| Load | 20% (2A) | 40% (4A) | 60% (6A) | 80% (8A) | 100% (10 A) |
| 1 unit | 113 | 45 | 30 | 21 | 14 |
| 2 units | 247 | 114 | 74 | 48 | 38 |
| 3 units | 396 | 178 | 117 | 80 | 58 |
| 4 units | 531 | 233 | 147 | 111 | 81 |
| SDU 10-24B with SDU 24-BATEM | | | | | |
| 1 EBP | 135 | 52 | 28 | 19 | 14 |
| SDU 20-24B with SDU 24-BATB | | | | | |
| Load | 20% (4A) | 40% (8A) | 60% (12A) | 80% (16A) | 100% (20A) |
| 1 unit | 46 | 21 | 10 | 06 | 04 |
| 2 units | 116 | 50 | 28 | 17 | 10 |
| 3 units | 178 | 80 | 46 | 31 | 20 |
| 4 units | 237 | 113 | 65 | 43 | 31 |
| SDU 20-24B with SDU 24-BATEM | | | | | |
| 1 EBP | 48 | 17 | 9 | 6 | 4 |

Note: Resistive loads were used to measure the battery backup times; using other types of loads may result in different backup times.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [UPS - Uninterruptible Power Supplies](#) category:

Click to view products by [Solahd](#) manufacturer:

Other Similar products are found below :

[SMART-1400-RM](#) [UPS1500ITSIT](#) [UPS25512](#) [UPS1024746](#) [UPS23916EBM](#) [UPSITSNMP](#) [TRIO-UPS-2G/1AC/24DC/10](#) [TRIO-UPS-2G/3AC/24DC/20](#) [QUINT4-UPS/24DC/24DC/5/EIP](#) [QUINT4-UPS/24DC/24DC/5/USB](#) [QUINT4-UPS/24DC/24DC/10/US](#) [QUINT4-UPS/24DC/24DC/20/PN](#) [SLNSPSPMBRK](#) [TSPC 240-124UPS](#) [SMART 2200NET](#) [1251220000](#) [LDX-U20](#) [SDUCFRELAYCARD](#) [SDUCFRELAYCARD](#) [SDUMBUSCARD](#) [ISRELAY](#) [SDU 24EXTBC6](#) [SDU-PMBRK](#) [SDU-24-BAT](#) [AKKUTEC2440](#) [SPUBC24120](#) [SPUC12360](#) [SPUC24720](#) [DR-UPS40](#) [SC620](#) [S8BA-24D24D120LF](#) [UPS003LSM](#) [1067327](#) [1081430](#) [1082548](#) [2320212](#) [2320225](#) [2320238](#) [2320241](#) [2320254](#) [2320267](#) [2320270](#) [2320377](#) [2320380](#) [2320393](#) [2320461](#) [2320526](#) [2866213](#) [2866226](#) [2866239](#)